

Bromine and Iodine Desorption by Air Under Foam Conditions SOV/153-58-5-24/28

consisted of vinyl plastics, the foam apparatus was of plexiglass. Artificially produced lyes with different NaJ or NaBr amounts in an NaCl solution served as initial solutions. The iodide was oxidized to iodine by sodium nitrite solution which had earlier been brought up to pH 2.3 by sulfuric acid. The degree of desorption A, the degree of efficiency η of a bottom of the apparatus, and the desorption coefficient K were calculated from the analysis results of the liquid prior to and after passing the foam apparatus. As is known, A increases with the air volume f per one part of volume of the liquid. Table (p 144) shows the values of f used at different experimental conditions in dependence on the linear air velocity w at a liquid consumption of L = 25 liter/hour. This corresponds to the values of the intensity of the liquid current i = 0.63 m³/m per hour, as related to the diameter of the discharge opening. The authors arrived at the following conclusions: 1) The efficiency of the foam use in the iodine and bromine blowing from a lye containing the two components proved to be high. 2) The value A amounts to 50-75% on a bottom of the foam apparatus at a w-value of from 1 to 3 m/sec. and at 35-40°,

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depending on the magnitude of the i -value. In a temperature increase of from 12.5 to 35-40° the A value (at $i = 0.63 \text{ m}^3/\text{m}$ per hour) increases from 43 to 75%. 3) Within the range of w 1-3 m/sec. and at the said i -value the A amounts to 65% for bromine at 15°, and to 73% at 35-40°. At $i = 2.52$ and $3.58 \text{ m}^3/\text{m}$ per hour A for bromine depends upon w . The optimum specific air consumption corresponding to the maximum of A is observed at $w = 2 \text{ m/sec}$. 4) The K -values determined in dependence upon w for iodine and bromine in that apparatus point to the fact that the rate of iodine desorption processes under the conditions given was controlled by the resistance of the liquid phase; the desorption velocity of bromine is, on the other hand, controlled by the resistance of the liquid as well as of the gaseous phase. 5) The absolute values of K of iodine and bromine desorption in the foam apparatus are several dozen times higher than in scrubber apparatus. The capacity of a unit of volume of the foam apparatus is 8 times higher than that of a scrubber with a headpiece operating according to an (extensive) film process. The following scientists took part in the experiments: A. P. Lopatina, N. A. Petrova, and V. S. Be-

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Bromine and Iodine Desorption by Air Under Foam Conditions

gorad. There are 6 figures, 1 table, and 15 references, 13 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensovet, Kafedra tekhnologii neorganicheskikh veshchestv (Leningrad Technological Institute imeni Lensovet, Chair of the Technology of Inorganic Substances)

SUBMITTED: November 25, 1957

Card 4/4

BUDYLINA, V.V.; MAKELINOVSKIY, L.I.; BEL'CHENKO, G.V.; ZINCHENKO, I.A.;
FILIMONOVA, A.A.; CHUMANOV, N.A.

Studies on the reactive properties of antidiphtherial sera
treated by aluminum hydroxide; author's abstract. Zhur.
mikrobiol.epid. i immun. 30 no.5:89-90 My '59. (MIRA 12:9)

1. Iz Stavropol'skogo instituta vaktsin i syvorotok, Mineralovodskoy
bol'nitsy, Cherkesskoy oblastnoy bol'nitsy, Stavropol'skoy infektsionnoy bol'nitsy i Pyatigorskoy infektsionnoy bol'nitsy.

(ANTACIDS, eff.

aluminum hydroxide on anti-diphtherial immune
sera (Rus))

(DIPHTHERIA, immunol.

antiserum, eff. of aluminum hydroxide (Rus))

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.; TERESHCHENKO, L.Ya.

Absorption of nitrogen oxides by soda solutions under conditions of foaming. Izv.vys.ncheb.zav.; khim.i khim.tekh. 2 no.5: 803-809 '59. (MIRA 13:8)

1. Leningradskiy tekhnologicheskii institut imeni Lenseveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxides)

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.

Absorption of nitrogen oxides by lime milk under bubbling and
frothing conditions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4
no.1:102-107 '61. (MIRA 14:6)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета,
kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxide) (Gases—Purification)

35188
/080/62/035/003/001/024
D258/D30

11.1160
AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya.
and Bel'chenko, G. V.

TITLE: The absorption of nitrogen dioxide by nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473-482

TEXT: The authors studied the influence of NO_2 pressure, temperature, and acid concentration on the rate of NO_2 absorption by HNO_3 in a foaming column, operating under atmospheric pressure. Specifically, a stream of inert gas carrying N-oxides was bubbled through a solution of HNO_2 containing nitric acid in a laboratory-scale foaming apparatus. Foaming was produced by a grid, through which the liquid-gas mixture was carried. It was shown that NO_2 absorption increased sharply with the increase in NO_2 partial pressure, P_{NO_2} , up to $P_{\text{NO}_2} = 0.33$ atm; the absorption rate, V , was

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The absorption of nitrogen ...

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expressed as follows:

$$K \left(\frac{P_1 - P_f}{\ln \frac{P_1 - P_p}{P_f - P_p}} - 0.0045 a \right)$$

where P_1 , P_f were the initial and final, partial pressures of NO_2 on entering and leaving the apparatus, and P_p - the equilibrium partial pressure of N-oxides over HNO_3 under the prevailing conditions. The relationship between the absorption coefficient K and the gas velocity W was found to be expressed by $k = C.W^{0.67}$; this relation was valid at P_{NO_2} below 0.01 atm., but K was independent

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of HNO_3 concentration, C, at higher partial pressures of NO_2 . The driving force of the process was found to be determined by the type of absorber and the equilibrium partial pressure of N-oxides. The absorption rate was almost doubled on raising the temperature from 10° to 50°C , while a three-fold increase in foam height caused this rate to increase by a factor of 2 to 3.5, depending on the gas velocity. The author proved that the foaming process was from 2 to 4 times more effective than the film-type absorption of NO_2 . There are 10 figures and 32 references: 20 Soviet-bloc and 12 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: E. D. Ermenc, Chem. Eng., 66, 4, 139 (1959); W. A. Dekker, E. Snoeck and H. Kramers, Chem. Eng. Sci., 11, 61, (1959); M. Peters and E. Koval, Ind. Eng. Ch., 51, 4, 577, (1959); G. G. Carberry, Chem. Eng. Sci., 9, 4, 189, (1959).

SUBMITTED: September 14, 1961

Card 3/3

S/080/62/035/004/001/022
D267/D301

11.11.60

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya.
and Belichenko, G. V.

TITLE: Role of the degree of oxidation of nitrogen oxides
during their conversion into nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 4, 1962, 717-
722

TEXT: During the manufacture of dilute HNO_3 in packed towers the degree of oxidation of the nitrogen-oxide-containing gas (the ratio of NO_2 to the sum of all oxides) in practice does not exceed 70 - 80%. Since the equilibrium pressure of nitrogen oxides is highly dependent on the degree of oxidation, the latter has a considerable effect on the driving force of the process. The authors demonstrated in an earlier paper (Ref. 5: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473) that the absorption of N oxides with a degree of oxidation = 1 can have a high effectiveness when using a froth cycle under atmospheric pressure. Using the apparatus
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Role of the degree ...

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D267/D301

described in the paper referred to above, the authors studied the effect of the degree of oxidation on the process of absorption of the oxide-containing gas at various conditions. The reduction of this degree results in a considerable decrease of the degree of conversion of oxides to HNO_3 . The process of absorption of nitrogen oxides with various degrees of oxidation by HNO_3 of various concentrations is described by $V = K\bar{\Delta}$ at $\Delta P > 0.01$ atm. (where V is defined in the previous paper, and $\bar{\Delta}$ is the mean driving force of the conversion process). Although the variations of the degree of oxidation considerably affect the degree of conversion, yet the effect on the efficiency of the apparatus is rather small. The rise of temperature within 10 - 50°C reduces the absorption. By using the froth cycle one obtains a considerable intensification not only of the absorption process, but also of the process of oxidation of NO. There are 6 figures and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P. G. Goudle and K. G. Denbigh, Trans. Far. Soc., 49, 1, 361, 1953, 39-52.

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Role of the degree ...

S/080/62/035/004/001/022
D267/D301

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Len-
soveta (Leningrad Technological Institute imeni Len-
sovet)

SUBMITTED: September 14, 1961

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X

S/O80/63/036/001/002/026
D204/D307

AUTHORS:

Pozin, M.Ye., Kopylev, B.A., Tereshchenko,
L.Ya. and Bel'chenko, G.V.

TITLE:

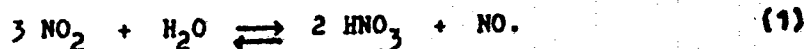
A method of calculating the composition of
nitrogen oxides over solutions of nitric acid

PERIODICAL:

Zhurnal prikladnoy khimii, v. 36, no. 1,
1963, 16 - 24

TEXT:

A method is described for calculating the
equilibrium conditions in the system aq.HNO_3 - N oxides, which
is useful in considering the equilibrium



The method is based on the construction of equilibrium curves
of $P_{\text{NO}+\text{NO}_2} - P_{\text{NO}_2}$ (where $P_{\text{NO}_2} = P_{\text{NO}_2} + 2 P_{\text{N}_2\text{O}_4}$, p's being
partial pressures). These equilibrium lines are plotted with the
aid of equation

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A method of calculating ...

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D204/D307

$$P_{NO_2} = m \sqrt[3]{P_{NO}} (1 + n \sqrt[3]{P_{NO}}) \quad (5)$$

Values of m and n are tabulated for the temperature range from 10 to 80 °C, in steps of 5°, and for HNO_3 concentrations of 5 to 65%, in steps of 5%. Values of P_{NO_2} are tabulated, for P_{NO} of 0.001 to 0.2 atm, for the temperature range of 10 - 75 °C, and for HNO_3 concentrations of 5 to 60%. Nomograms are also given, for 30 and 35°C, which allow the determination of partial pressures and composition of N oxides over aq. HNO_3 . Use of the method is illustrated with examples. A.P. Shubina assisted in the preparation of tables and nomograms. There are 2 figures and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni
Lenseveta (Leningrad Technological Institute
imeni Lenseveta)

SUBMITTED: September 14, 1961

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POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Oxidation of nitric oxide in the course of nitric acid production.
Zhur.prikl.khim. 35 no.11:2353-2359 N '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.
(Nitric acid) (Nitrogen oxide) (Oxidation)

POZIN, M.Ye.; KOPLYEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Method of calculating the equilibrium composition of nitrose gas
over nitric acid solutions. Zhur.prikl.khim. 36 no.1:16-24 Ja
'63. (MIRA 16:5)

1. Leningradskiy tekhnologicheskii institut imeni L'voveta.
(Nitric acid) (Nitrogen oxides)

ABRAMOVA, N.A., nauchn. sotr.; BEL'CHENKO, G.V., kand. tekhn. nauk;
 BERENBLIT, V.V., nauchn. sotr.; VASIL'YEV, V.P., kand. khim.
 nauk; DOBYCHIN, D.P., doktor khim. nauk; IOFFE, B.V., dokt.
 khim. nauk; KAMINSKIY, Yu.L., nauchn. sotr.; KARPOVA, I.F.,
 kand. khim. nauk; KOPYLEV, B.A., doktor khim. nauk;
 LUTUGINA, N.V., kand. khim. nauk; MATEROVA, Ye.A., kand.
 khim. nauk; MORACHEVSKIY, A.I.G., kand. khim. nauk;
 MORACHEVSKIY, An.G., kand. khim. nauk; NIKEROV, A.E., kand.
 khim. nauk; PAL'M, V.A., kand. khim. nauk; RABINOVICH, V.A.,
 kand. khim. nauk; SOKOLOV, P.N., kand. khim. nauk;
 FRIDRIKHSBERG, D.A., kand. khim. nauk; TSYGIR, Ye.N., nauchn.
 sotr.; SHAGITSULTANOVA, G.A., kand. khim. nauk; SHKODIN, A.M.,
 doktor khim. nauk; YATSIMIRSKIY, K.B.; GRIGOROV, O.N., doktor khim.
 nauk, red.; ZASLAVSKIY, A.I., kand. khim. nauk, red.; MORACHEVSKIY,
 Yu.V., prof., red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.;
 POZIN, M.Ye., doktor tekhn. nauk, red.; PORAY-KOSHITS, B.A., doktor
 khim. nauk, red.; PROTASOV, A.M., kand. fiz.-mat. nauk, red.;
 ROMANKOV, P.G., red.

[Handbook for the chemist] Spravochnik khimika, 2. izd., perar. 1
 dop. Moskva, Khimiia. Vol.3. 1964. 1004 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Romankov). 2. Deystvitel'nyy
 chlen AN Ukr.SSR (for Yatsimirskiy).

BEL'CHENKO, K., inzh. gidrograf

Outstanding explorer of the northern seas. Mer. flot. 24
no. 11:41 N '64. (MIRA 18:8)

1. Deystvitel'nyy chlen Geograficheskogo obshchestva SSSR.

BEL'CHENKO, K., inzh.-gidrograf

Explorer of the Sakhalin Island and the Amur Valley. Mor.
flot 20 no. 12:36 D '60. (MIRA 13:12)

1. Predstavitel'nyy chlen Geograficheskogo obshchestva SSSR.
(Soviet Far East---Exploring expeditions)
(Boshniak, Nikolai Konstantinovich, 1830-1899)

BEL'CHENKO, K., inzh.-gidrograf

Explorer of the Peter the Great Gulf. Mor. flot 21 no.9:37 S
'61. (MIRA 14:9)

1. Deystvitel'nyy chlen Geograficheskogo obshchestva SSSR.
(Peter the Great Gulf)
(Babkin, Vasilii Matveevich)

BEL'CHENKO, K. A.

"Designation of Support Points in Water," Zapiski po Gidrografii (Articles on Hydrography),
No 2, 1945 (153-158).
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

BEL'CHENKO, K.A.

M.F. Reineke, his life and work in the field of hydrography.
Trudy Inst.ist.est.i tekhn. 37:118-127 '61. (MIRA 14:10)
(Reineke, Mikhail Frantsevich, 1801-1859)

BEL'CHENKO, K.A.

Andrei Ippolitovich Vil'kitskii, 1858-1913. Mat. Otd. mat. geog.
i kart. Geog. ob-va SSSR no.1:29-41 '61. (MIRA 17:8)

BEL'CHENKO, M.I.

Determining the starting time of the electric drive of oil-well pumps. Energ.
biul. no.10:23-25 0 '53. (MIRA 6:10)

(Electric driving) (Petroleum--Pumping)

BEL'CHENKO, M. I.

Means of reducing the vibration of air compressor and electric
motor bearings. Gaz.prom. 5 no.11:32-35 N '60. (MIRA 13:11)
(Air compressors) (Gas, Natural--Pipelines)

BEL'CHIKOV, M.Ya.; SAMYLIN, N.A.; BERDICHEVSKAYA, L.I.

Use of polyacrylamide for the coagulation of flotation tails.
Koks i khim. no.10:15-18 '60. (MIRA 13:10)

1. Yenakiyevskiy koksokhimicheskiy zavod.
(Yenakiyevskiy Coal preparation) (Acrylamide)
(Coagulation)

BEZDENEZHNYKH, I.S.; TYRKOVA, Ye.S.; BEL'CHENKO, N.I., red.;
BLAZHENKOVA, G.I., tekhn. red.

[Protection of the population from bacteriological
weapons] Zashchita naseleniia ot bakteriologicheskogo oru-
zhiia. Moskva, Izd-vo DOSAAF, 1963. 46 p. (MIRA 16:10)
(Biological warfare)

VESELOVSKIY, Aleksandr Ivanovich; KATIN, Lev Nikolayevich;
KONYUSHENKO, I.A., red.; BELICHENKO, N.I., red.; SCRKIN,
M.Z., tekhn. red.

[Radio-controlled ship models] Radioupravliaemaia model'
korablia. Moskva, Izd-vo DOSAAF, 1963. 80 p.
(MIRA 16:10)

(Ship models--Radio control)

SERYAKOV, Ivan Maksimovich; KONYUSHENKO, I.A., red.; BEL'CHENKO,
N.I., red.; YURTAIKINA, N.N., tekhn. red.

[Laws of streets and roads] Zakony ulits i dorog. Izd.2.,
perer. i dop. Moskva, Izd-vo DOSAAF, 1963. 83 p.
(MIRA 16:10)

(Traffic regulations)

GRITSKEVICH, Anatoliy Georgiyevich; MYGKOV, V.A., redaktor; ~~REL'CHENKO,~~
~~K.I.~~ redaktor izdatel'stva; KOLESHNIKOVA, A.P., tekhnicheskiy
redaktor

[Tractor operator Aleksei Gorbushin] Traktorist Aleksei Gorbushin.
Moskva, Goslesbumizdat, 1956. 29 p. (MLBA 9:12)
(Tractors) (Gorbushin, Aleksei)

SOKOLOV, Petr Vladimirovich; SERGOVSKIY, P.S., redaktor; ~~HEL'CHENKO, N.I.~~,
redaktor izdatel'stva; SHITS, V.P., tekhnicheskiy redaktor

[Accelerated methods of drying wood; dry kilns and drying in
hydrophobic liquids] Uskorennye sposoby sushki drevesiny;
kamernaya sushka i sushka v gidrofobnykh zhidkostiakh. Moskva,
Goslesbumizdat, 1956. 81 p. (MLBA 9:10)

1. Dotsent Lesotekhnicheskoy akademii im. S.M.Kirova (for Sokolov)
(Lumber--Drying)

BEYLIN, Sholom Iyerukhinovich; SHAYTOR, Petr Seliverstovich; AKSENOV, G.A.,
redaktor; BNL'CHENKO, N.I., redaktor izdatel'stva; BACHURINA, A.M.,
tekhnicheskii redaktor

[Manufacture of spools] Katushechnoe proizvodstvo. Moskva, Gosles-
bunizdat, 1956. 175 p. (MIRA 10:1)

(Woodworking machinery) (Thread)

DAROVSKIY, Boris Sergeyevich [deceased]; PRIGOZHIIY, S.S., redaktor;
BEL'CHENKO, N.I., redaktor izdatel'stva; KOLESNIKOVA, A.V.,
tekhnicheskiiy redaktor

[Cardboard manufacture] Proizvodstvo kartona. Moskva, Goslesbum-
izdat, 1956. 185 p.
(Paperboard) (MLRA 9:10)

PROBBER, Pinkhos Vol'kovich; NIKOLAYEV, N.N., redaktor; BEL'CHENKO, N.I.
redaktor izdatel'stva; KOLESNIKOVA, A.P., tekhnicheskii redaktor

[Manufacture of wall and decorative paper] Proizvodstvo oboev i
dekorativnykh bumag. Moskva, Goslesbumizdat, 1956. 246 p.
(Wallpaper) (MIRA 9:11)
(Paper industry)

FABRITSKIY, Khanon Borisovich; SEMENOV, A.I., redaktor; BEL'CHENKO, N.I.,
redaktor; SHITS, V.P., tekhnicheskiy redaktor.

[Establishing production norms for sawmills and woodworking industries]
Tekhnicheskoe normirovanie v lesopil'no-derevesobrabatyyushchem
proizvodstve. Izd. 2-ee, perer. Moskva, Goslebbumizdat, 1956. 265 p.
(Woodworking industries) (Sawmills) (MIRA 9:5)

BEL'CHENKO, N.I.

KHAFNER, Frants [Hafner, Franz]; SYROMYATNIKOV, S.A., dotsent, redaktor
[translator]; BEL'CHENKO, N.I., redaktor izdatel'stva; SHITS, V.P.,
tekhnicheskii redaktor

[Modern lumber transportation. Translated from the German]
Sovremennyyi transport lesa. Perevod s nemetskogo pod red. S.A.
Syromiatnikova. Moskva, Goslesbumizdat, 1956. 299 p. (MLRA 10:5)
(Lumber--Transportation)

SUR, Pavel Semenovich; KARTASHEV, R.D., red.; BEL'CHENKO, N.I.,
red.; SHIKIN, S.T., tekhn. red.

[Manual on steering-gear handling] Posobie po rulevomu delu.
Moskva, Izd-vo DOSAAF, 1963. 174 p. (MIRA 16:12)
(Ship handling) (Steering gear)

KRIVONOSOV, Lev Mikhaylovich; BEL'CHENKO, N.I., red.; YEMEL'YANOV,
Yu.V., red.

[Calculations and design in amateur boatbuilding] Raschet
i chertezhi v liubitel'skom sudostroenii. Moskva,
DOSAAF, 1964. 166 p. (MIRA 18:6)

BEL'CHENKO, S., inzh.; BOGDANOV, P., inzh.

Improving the vacuum systems. Pozh.delo 8 no.3:23-24, Mr '62.
(MIRA 15:4)

(Fire engines)

SHVEI SOVA, K.A.; BEL'CHENKO, T.I.

Changing mechanisms in furnaces for the determination of the
heat resistance of refractory materials. Ogneupory 28 no.4:
180-181 '63. (MIRA 16:6)

1. Zaporozhskiy ogneupornyy zavod.
(Refractory materials---Testing)

NIKITIN, S.S.; YAKIMOV, P.I.; BEL'CHENKOV, I.A.

Renovation of the covering of the frame of the Volgograd Tractor Plant. Prom.stroi. 41 no.3:6-8 Mr '64. (MIRA 17:3)

BELCHER, E.H.; COHEN, M.; DUDLEY, R.A.; PARKER, H.G.; TSIEH, K.C.; VETTER, H.

Progress in the use of isotopes and radiation sources in
medicine. Cas. lek. cesk. 104 no.19:100-104 14 My '65.

1. MAAE a WHO.

DELCHER, R.

✓ Derivatographic study of potassium hydrogen phthalate.
R. Belcher, L. Erdely, F. Pálinka, and G. Liptay (Tech.
Univ. Budapest, Hung.). *Talanta* 5, 53-7 (1960).—Deriva-
tographic measurements showed that the decompn. of $C_8H_5O_4K$
begins at 190-200°. The nonhygroscopic prepn. can be
dried at 100-150°. Decompn. proceeds in 8 steps, the rate
depending on the rate of increase of temp. $C_8H_5O_4K$ is
formed first, phthalic anhydride and water being removed.
Enthalpy changes also can be obtained from the derivato-
grams; this yields information on the further mechanism of
thermal decompn. and changes of state of the sample.

Bella L. Rosenfeld

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JAJ(NB)

KOL'TGOF, I.M. [Kolthoff, I.M.]; BELCHER, R.; STENGER, V.A.; MATSUYAMA, Dah.
[Matsuyama, G.]; LUR'YE, Yu.Yu., prof., red.; VASKEVICH, D.N., red.;
ZAZUL'SKAYA, V.F., tekhn. red.

[Volumetric analysis] Ob'emnyi analiz. Pod red. i s dopolneniami
IU.IU.Lur'e. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry.
Vol.3. [Practical part; oxidation-reduction methods] Prakticheskaja
chast': Metody okisleniya--vosstanovleniya. 1961. 840 p. Publ. in
English under the title: "Titration methods: oxidation-reduction
reaction. (MIRA 14:8)
(Chemistry, Analytical) (Oxidation-reduction reaction)

BELCHER, Ronald; SVEHLA, Gyula, dr. [translator]

Some recent developments in neoclassic analytical chemistry.
Kem tud kozl MTA 20 no.2:231-240 '63.

1. Birminghami Tudományegyetem Analitikai Kémiai Tanszéke,
Birmingham, Anglia (for Belcher).

BELCHEV, Den'o, inzh.; PETROV, Petur, inzh.; RADEV, Khristo, inzh.;
STANULOV, Nikolai, inzh.; TSANEV, Tsanko, inzh.

Automatic hopper for measuring water in molding mixtures.
Tekhnika Bulg 13 no.7:31-33 '64

2

Subject: Ammonium phosphate I. IV. Polytherm of the ternary system: ammonium sulfate, water, ammonium monophosphate. F. V. Pol'tsev and A. G. Bergman. J. Applied Chem. (U.S.S.R.) 17, 530-5 (1944) (English summary); cf. C.A.B. 39, 2259. In the system $H_2O-(NH_4)_2SO_4-NH_4H_2PO_4$, the isotherms and polytherms were established from the complex i.p. to 30° . The system is characterized by 3 fields of soln. corresponding to 3 solid phases: ice, $(NH_4)_2SO_4$, and $NH_4H_2PO_4$. The eutectic lies at 27.5% $(NH_4)_2SO_4$, 4% $NH_4H_2PO_4$, and 68.1% H_2O , and at -19.5° . The character and direction of isotherms in this system, as well as the dimensions of the solid phase fields, show an effective salting-out effect of $(NH_4)_2SO_4$ on $NH_4H_2PO_4$.

G. M. Kosolapoff

AIR-113 METALLURGICAL LITERATURE CLASSIFICATION		CITY/STATE	
SOURCE SYNDICATE	SECONDARY SOURCES	COLLECTION	COLLECTOR OR GUY
SOURCE NO.	SECONDARY NO.	COLLECTION NO.	COLLECTOR OR GUY NO.

Bel'chey, F.V.

300

Phase diagram of the ternary system potassium dihydrogen phosphate - potassium sulfate - water F. V. Bel'chey
 Izv. Akad. Nauk SSSR, 1954, No. 10, 1993. This system was studied at -3.1° to $+30^{\circ}$. In addition were studied the binary systems KH_2PO_4 - H_2O and K_2SO_4 - H_2O . No solid solubility or double salts were found in the ternary system. The eutectic of this system is at -3.1° at the compn. KH_2PO_4 , 10.3; K_2SO_4 , 4.2; and H_2O 85.5 wt. % M. Horak

AB Good 1954

Synthesis of α -hydroxy acids by means of mixed oxide catalysts

F. V. Belichev and A. I. Shchegolev, *Dokl. Akad. Nauk SSSR*, 1958, 20, 275.

2,2,2-Trifluoroethanol was oxidized with ammonia at temp. 375-425° and space velocity 0.5, 0.75 and 0.9 with mol ratio of ammonia/alcohol 4. The products were α -hydroxy acids and α -hydroxy ketones. The yield of α -hydroxy acids was 10-15%.

The authors suggest that the reaction proceeds via the formation of a mixed oxide catalyst. The catalyst is active for the oxidation of 2,2,2-trifluoroethanol and 2,2,2-trifluoroethanol.

The authors suggest that the reaction proceeds via the formation of a mixed oxide catalyst. The catalyst is active for the oxidation of 2,2,2-trifluoroethanol and 2,2,2-trifluoroethanol.

Belorusskaya sel' skokhozyaystvennaya
akademiya i Institut organicheskoy
khimii AN SSSR,

5(3)

AUTHORS:

Bel'chev, F. V., Shuykin, N. I.,
Novikov, S. S.

SOV/62-59-4-23/42

TITLE:

Catalytic Synthesis of Aliphatic Amines Over Mixed Oxidizing Catalysts Under Increased Pressure (Kataliticheskiy sintez alifaticheskikh aminov na smeshannykh okisnykh katalizatorakh pri povyshennom davlenii)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 710-714 (USSR)

ABSTRACT:

The experimental results found in the present work show that a considerable yield of amines can be obtained by a scientifically founded selection of catalysts and conditions of aminating alcohols. The relative activity of the following catalysts was investigated: pure aluminum oxide (85 %) + ferrous oxide (15 %), aluminum oxide (95 %) + titanium oxide (5 %), aluminum oxide (90 %) + magnesium oxide (10 %) and industrially produced aluminum silicate. The alcohols were twice distilled before the investigation was carried out. Their properties were in good agreement with those described in technical publications (Refs 4-6). The experiments were carried out in a continuous flow apparatus (Fig). The experimental results

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are shown in tables 1, 2, and 3. The optimum conditions for the catalytic amination of n-butanol were determined on an aluminum-titanium catalyst which showed the highest activity: ammonia pressure 8.5 atmospheres, reaction rate 0.37 h^{-1} and 370° . A further pressure increase reduces the amine yield, probably because of the condensation of ammonia under the conditions assumed. With catalytic amination of alcohols less gas formation is observed, probably because of the slower process of alcohol decomposition. If the temperature exceeds the optimum value the gas formation is increased and amine yield reduced. It was observed that amination stops upon deviation from the optimum passage rate of the alcohol and ammonia vapors over the catalyst. As compared to pure aluminum oxide, almost all mixed catalysts developed a strong activity (Tables 2 and 3). Under the conditions assumed small quantities of unsaturated hydrocarbons, hydrogen, paraffin hydrocarbons, aldehydes, and nitriles were formed, in addition to the amines, on all catalysts investigated. The properties of the amines separated out of the catalysates are shown in

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Catalytic Synthesis of Aliphatic Amines Over Mixed
Oxidizing Catalysts Under Increased Pressure

SOV/62-59-4-23/42

table 4. There are 1 figure, 4 tables, and 26 references,
4 of which are Soviet.

ASSOCIATION: Belorusskaya sel'skokhozyaystvennaya akademiya (Belorussian
Agricultural Academy). Institut organicheskoy khimii im.
N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic
Chemistry imeni N. D. Zelinskiy of the Academy of Sciences,
USSR)

SUBMITTED: July 12, 1957

Card 3/3

BEL'CHEV, F.V.; SHUYKIN, N.I.; NOVIKOV, S.S.

Catalytic amination of alcohols. Izv.AN SSSR Otd.khim.nauk no.4:
649-652 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Amination) (Alcohols)

BELCHEV, B., inzh.

Cooling of the instrument and pieces in the course of cutting.
Mashinostroene 10 no.12:22-25 '61.

1. Zavod za metalorezashti mashini, Sofia.

BELCHEV, B., inzh.

A cooling liquid for the mechanical processing of cast-iron details in chipping. Nauka i tekhnolozhiya 14 no.7:22 J1 '62.

1. Tekhnolog pri Zavoda za metalorezhashti mashini, Sofia.

BELCHEV, Belcho G.

Influence of bivalent metal cations on the decomposition of
ribonucleic acids in the homogenates of rat and chicken livers.
Izv biokhim BAN 2:47-56 '64.

1. Central Laboratory of Biochemistry of the Bulgarian Academy
of Sciences, Sofia.

BELCHEV, Deniu, inzh.; RADEV, Khristo, inzh.; STANULOV, Nikolai, inzh.;
TSAHEV, Tsanko, inzh.

A method for the improvement of foundry production processes. Tekhnika
Bulg 11 no.7:245-246 '62.

1. Sektsiia "Avtomatika i telemekhanika" pri Bulgarskata akademiia
na naukite.

BELCHEV, D.

Action of PAS, Rimicidin, and No. 41 tested in vitro on
Mycobacterium johnei. Izv Vet inst zaraz parazit 7 145-148
'63.

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Izv Vet inst zaraz parazit 7 137-144 '63.

BELCHEV, D.; RADEV, Khr.; SIVOV, F.; STANULOV, N.; TSANEV, TS.

Automation of certain foundry processes. Izv Lab avtomat telemekh
1:95-108 '64.

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Vol 6 #4, Apr. 1951, Bulgaria)

East European Vol 2 #8
SO: Monthly List of ~~XXXXXX~~ Accessions, Library of Congress, August 1953, Uncl.

ZAIMOV, K.; GERANLIEV, B.; BELCHEV, D.; ZAIMOVA, S.

Observations on mental processes in patients with severe schizophrenic personality disorders during the course of occupational therapy.
Nauch. tr. vissh. med. inst. Sofia 39 no.6:115-132 '60.

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(OCCUPATIONAL THERAPY) (SCHIZOPHRENIA ther)

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Vol. 5, no. 11, Nov. 1955. RATSIONALIZATSIA. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

MALYCHUK, A.A., insh.; MEL'CHUK, I.V., insh.

Underwater greasing of slip launching ways. Sudostroenie 24
no. 12:46-48 D '58. (MIRA 12:2)
(Shipyards--Equipment and supplies) (Ships--Launching)

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Sulfur in the Bulgarian young brown coals. Tekhnika Bulg 2
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Coal from the Maritsa-Istok region. Tekhnika Bulg 2 no.12:6-10
D '53.

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Characteristics of our anthracite coal in brief. p. 34.
MINNO DELO, Sofiya, Vol. 10, no. 1, Jan./Feb. 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

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Brief Characterization of our Anthracite Coals. Minno Delo (Mining),
#1:34:Jan 55

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BELCHEV, K. Qualitative indexes of our coal. p. 37

Vol. 11, No. 3, May/June 1956.

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TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 2, February 1957

BELCHEV, K.

Better utilization of coal by improving the sifting. p. 44.

TEZHKA PROMISHLENOST. Vol. 5, no. 5, 1956

Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Library of
Congress, Vol. 6, No. 1, January 1957

BULGARIA/Chemical Technology - Processing of Solid Fossil
Fuels.

H-22

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 82914
Author : Belchev, K.
Inst : Belg. AN.
Title : The Physical and Chemical Studies of Bulgarian Brown Coals
Orig Pub : Izv. khim. in-t. Belg. AN, 1957, 5, 475-508.
Abstract : The summarized results of the studies on the physical-chemical properties of Bulgarian brown coals in respect to various mining sources are furnished. It is pointed out that their moisture content is usually 13-18% and that of the ash, 30-40%. A distribution scheme is suggested for consumers which is based on the quality of the coal according to a sieve analysis: the class from 0-6 mm as a dustlike fuel; from 6-12 mm for furnaces with

Card 1/2

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Technological investigation of the coal from the Bobov Dol basin; physical and chemical indicators and enrichment. p. 133

Sofia. Nauchnoizsledovatel'ski institut za tekhnolozhni izsledvaniia na gorivata. GODICHNIK. Sofia, Bulgaria. Vol. 4, 1959

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December 1959
Uncl.

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"Some physical properties of Bulgarian lignite and its losses in crumbliness."

MINNO DELO, Sofia, Bulgaria, Vol. 14, no. 2, Mar./Apr. 1959.

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Unclas

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Physical properties of Bulgarian lignite. p. 40.

Spravochnik po tsvetni metali i splavi. Sofia, Bulgaria. Vol. 10,
no. 8/9, Aug./Sept. 1959.

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February, 1960. Uncl.

BEICHEV, K., inzh., st. nauchn sputrudnik

More precise and less expensive sample taking from coal mines.
Ratsionalizatsiia no.5:31-35 '62.

1. IGT.

TONCHEV, Iv., inzh. khim; TORBOV, Tsvetan, inzh.; BEICHEV, K., inzh.

How to avoid slagging in the combustion chambers of the TP-170 boilers at the burning of certain mixtures of lignite and brown coals. Elektroenergiia 13 no.3:3-7 Mr '62.

BEICHEV, Kiril, insh.

Relations and interdependence of the basic indexes of the
Maritsa Istok coals. Elektroenergiia 13 no.9:3-8 & '62.

BELONOV, K., inzh.; TODOROV, V., inzh.; STANKOV, L., inzh.

Mechanical control in screen analysis. Min delo 17 no.7:12-14 JI '62.

1. Nauchnoizsledovatel'ski institut za goriva i toplotehnika (for Belchev and Todorov). 2. Durszhavno minno predpriatie "Bolshevik" (for Stankov).

BELCHEV, K., inzh.; GEORGIEV, At., inzh.; KOLEV, N., inzh.

Coal dressing, a means of cost reduction in industrial
production. Min delo 18 no. 2:16-20 F '63.

L 29993-66 R0
ACC NR: AP6020085

SOURCE CODE: BU/0017/65/020/001/0016/0018

AUTHOR: Bolchev, L. (Lieutenant colonel of the medical service); Kamenov, P.
(Lieutenant colonel of the medical service)

22
B

ORG: none

TITLE: ⁶Peacetime poisoning with fumes of explosives in a naval vessel

SOURCE: Voenno-meditsinsko delo, v. 20, no. 4, 1965, 16-18

TOPIC TAGS: toxicology, poison effect, military medicine

ABSTRACT: Detailed description of consequences of a few unexplained shots from automatic weapon in a powder magazine in a ship at berth; some released explosive started burning in that enclosure with only a small ventilating window; of 6 sailors who were sent in to clean up, one who had no protective mask died within 48 hours; 2 more were very severely ill but recovered. Two case reports. [JPRS]

SUB CODE: 06 / SUM DATE: none

Cord 1/1-20

Belchev, M.

New device for removing the bolts of rail joints. p. 35.
Mechanical cleaning of well. p. 39

TRANSPORTNO DELO, Sofia, Bulgaria, Vol. 11, no. 6, 1959.

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Uncl.

Belchev, M.

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X-ray examination and x-ray pictures of severe intestinal obstruction. Khirurgia, Sofia 10 no.2:130-138 1957.

1. Bulgarska bolnitsa - gr. sinidshu, koreia Gl. lekar:
G. Mitrov.

(INTESTINAL OBSTRUCTION, diag.
x-ray diag. (Bul))

MINTARSKI, B.; BELCHEV, M.

Roentgenographic examination and roentgenographic picture of the digestive tract. Khirurgia, Sofia 10 no.12:1093-1099 1957.

1. Bulgarska bolnitsa--gr. sinidshu, koreia. Gl. lekar: G. Mitrov.
(GASTROINTESTINAL SYSTEM, radiography,
roentgenoscopic & roentgenographic methods (Bul))

BELCHEV. M.

ZOOGRAFSKIY, B. (Bolgariya); TERZIYEV, G. (Bolgariya); TOLEV, Iv. (Bolgariya)
~~BELCHEV, M.~~ (Bolgariya)

Study of Kashin-Beck's disease in the Korean Democratic
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1. Iz Bolgarskoy bol'nitsy v Koreye (glavnyy vrach G. Mitrov)
i kafedry propedavtiki vnutrennikh bolezney Voenno-meditsinskoy
akademii imeni I.P. Pavlova v Plovdive (zav. kafedroy - dotsent
A. Mitov)

(BONE DISEASES, statist.

Kashin-Beck's dis. in Korea)

MIKHOV, N., inzh.; TSANEVA, N., d-r, starshi nauchen sutrudnik;
MASHKAROV, B., inzh., starshi nauchen sutrudnik; LUKANOV, M.,
d-r dots., starshi nauchen sutrudnik; STAROSTINA, V., arkh.;
DOROSIEV, B., arkh; BELCHEV, N., arkh.; GUGOV, N., inzh.

Conference on science and technology for youth. Nauka i tekhn
mladsh 14 no.6:2-4 Je '62.

1. Direktor na fabrika "Ernst Telman", Sofia (for Mikhov).
2. Institut po okhrana na truda i profesionalnite bolesti (for Tsaneva, Maskarov, and Lukanov).
3. Starshi proektant pri "Zavodproekt" (for Starostina).
4. Glaven spetsialist pri Komiteta po promishlenostta (for Dorosiev).
5. Grupov rukovoditel pri "Promproekt" (for Belchev).
6. Nachalnik Otdel "Mashinostroene i elektropromishlenost" pri Komiteta po tekhnicheskii progres (for Gugov).

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A competition for the honorary title of the "Best Foreman of
the Paper Mill." Khim i industriia 34 no.1:34-35 '62.

ANGELOV, Zl.; IORDANOVA, Ar.; BELCHEV, P.; DIKL'OVSKI, TS.

Whitening of the leaf wood (beech, poplar) sulfate pulp under operational plant conditions. Khim i industriia 36 no.6: 218-221 '64.

1. Scientific Research Institute for Chemical Industries, Sofia.

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No. 1, 1957.

Monthly List of East European Accessions Index (EEAI), The Library of
Congress, Volume 8, No. 8, August 1959.

Unclassified

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Developemnt of the Siviet agrarian economy.p. 6 (NARODNA KOOPERATSIIA. NO. 10, Oct. 1952 Sofya)

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSORIES, Vol 2, Library of Congress, August 1954
Vol. #8 Uncl.

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TECHNOLOGY

Periodicals: TEZHKA PROMISHLENOST Vol. 7, no. 12, Dec. 1958.

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Exhibition of new electric-measuring instruments from the German Democratic Republic. p. 11.

Varna, the 3200-ton freight motor ship. p. 15.

Application of CO₂ method in preparing the core for casting nonferrous metals. p. 16

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May 1959, Unclass.

MARINOV, An.; HELCHEV, Tsv.

Plan for a systematic implementation of technical normalisation.
Trud tseni 4 no.4:62-67 '62.

PENKOV, I.; BELCHEVA, I.

Supplying the Madan mining basin with vegetables, fruits, and milk. Izv Geog inst BAN 7:183-199 '63.

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"Scientific-Technical Association in Khaskovo Helps Fulfill the Plan", p. 2.
(TEKHNIЧЕСКО ДЕЛО, Vol. 5, no. 111, Sept. 1953, Sofiya, Bulgaria).

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New methodology for warping yarn of various numbers. Leh. prom.
no.4:15 8-7 '64 (MIRA 18:1)

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Interlock knit fabrics for outerwear clothing. Leh.prom. no.2:16-17
Ap-Je '65. (MIRA 18:10)

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no.11:37-40 '64. (MIRA 18:8)

BELCHEVA, M.

SHCHURKALOV, IL.; IANUKOV, L.; SVETOSLAVOVA, Ef.; BELCHEVA, M.

Manual extraction of the placenta and manual and instrumental examination of the uterus following labor. Khirurgia, Sofia 7 no.9:538-545 1954.

1. Meditsinska Akademiia Mulko Chervenkov, Sofia. Katedra po akusherstvu i ginekologiya. Zaveshdashch katedrata: prof. G.Boiadshiev.

(PLACENTA,
manual extraction)
(UTERUS,
exam. after labor)
(LABOR,
uterus exam. after labor)

BELCHEVA, M.; IVANOVA, I.; POPOV, G.

Blood picture in newborn infants at term and role of residual blood in formation of physiologic jaundice and modification of blood picture. Khirurgiia, Sofia 8 no.3:225-231 1955.

1. Vlash.meditsinski institut V. Chervenkov-Sofia katedra po akusherstvo i ginekologiya

(BLOOD,

picture in newborn, role of residual blood)

(INFANT, NEWBORN, physiology,

blood picture & role of residual blood)

BELCHEVA, M.

~~SURNAME~~ (In caps); Given Names

Country: Bulgaria

Academic Degrees:

Affiliation: Senior Scientific Collaborator at the Scientific Research
Institute for Obstetrics and Gynecology (Nauchno Izsledo-

Source: vatselski Institut po Akusherstvo i Ginekologiya, NIIAG)

Sofia, Sreden Meditsinski Rabotnik, No 2, 1961, pp 15-20

Data: "The Role of the Auxiliary Medical Worker in Ensuring
Normal Lactation After Childbirth."